

[illegible]

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A wavelength-determining unit for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$  includes a wavemeter unit for determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ . An absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values determines second wavelength values  $\lambda_2(t)$  as such of the known absolute wavelength values covered by the optical signals  $\lambda(t)$ . An evaluation

unit receives the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values and provides for corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.

### In The Claims

Please amend the claims as follows:

1. (Amended) A wavelength-determining unit for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$ , comprising:

a wavemeter unit adapted for determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ ,

an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values, and being adapted for determining second wavelength values  $\lambda_2(t)$  as such of the known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and

an evaluation unit adapted for receiving the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values and for providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.

2. (Amended) The wavelength-determining unit of claim 1, wherein the wavemeter unit has a wavelength characteristic known in principle or derived from former measurements, whereby the evaluation unit adjusts the known wavelength characteristic based on the determining second wavelength values  $\lambda_2(t)$ .

3. (Amended) The wavelength-determining unit of claim 1, wherein the evaluation unit comprises a correlation unit for correlating the determined first wavelength values  $\lambda_1(t)$  with the second wavelength values  $\lambda_2(t)$ .

4. (Amended) The wavelength-determining unit of claim 1, wherein the evaluation unit determines at least one of one or more offset or correction values

for correcting the determining first wavelength values  $\lambda_1(t)$  to the corrected wavelength values  $\lambda_1'(t)$ .

5. (Amended) The wavelength-determining unit of claim 1, wherein the wavemeter unit comprises an interferometer.

6. (Amended) The wavelength-determining unit of claim 1, wherein the absolute-measuring unit comprises a gas absorption cell.

7. (Amended) A measuring unit for measuring an optical characteristic of a device under test – DUT –, comprising:

a wavelength variable laser source adapted for providing an optical signal  $\lambda(t)$  to the DUT, the optical signal  $\lambda(t)$  having a wavelength variation over the time;

a wavelength-determining unit adapted for receiving the optical signal  $\lambda(t)$  and determining wavelength values  $\lambda_1(t)$  thereof over the time, said wavelength determining unit comprising a wavemeter unit adapted for determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ , an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values, and being adapted for determining second wavelength values  $\lambda_2(t)$  as such of the known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and a first evaluation unit adapted for receiving the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values and for providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values;

a receiver for receiving a signal response on the optical signal  $\lambda(t)$  provided to the DUT; and

a second evaluation unit receiving the signal response and the thereto corresponding determined wavelength values  $\lambda_1'(t)$ .

8. (Amended) A measuring unit for measuring an optical characteristic of a device under test – DUT –, comprising:

a wavelength variable laser source adapted for providing an optical signal  $\lambda(t)$  to the DUT, the optical signal  $\lambda(t)$  having a wavelength variation over the time,

a wavelength-determining unit adapted for receiving the optical signal  $\lambda(t)$  and determining relative wavelength values  $\lambda_1(t)$  and absolute wavelength values  $\lambda_2(t)$  thereof over the time,

a receiver for receiving a signal response  $I(t)$  on the optical signal  $\lambda(t)$  provided to the DUT, and

an evaluation unit receiving the signal response of the receiver and thereto calculating the corresponding wavelength values  $\lambda_1'(t)$  out of the wavelength values  $\lambda_1(t)$  and  $\lambda_2(t)$  from the wavelength-determining unit resulting in a spectral response  $I(\lambda)$  of the DUT.

9. (Amended) A method for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$ , comprising:

determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ ,

using an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values for determining second wavelength values  $\lambda_2(t)$  as such known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and

providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.

10. (Amended) A software product, stored on a data carrier, for executing a method for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$ , when run on a data processing system such as a computer, said method comprising:

determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ ,

using an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values for determining second wavelength values  $\lambda_2(t)$  as such known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and

providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.

**Remarks**

Claims 1-10 remain in the application.

The specification has been amended to include headings consistent with US practice.

The Abstract of the Disclosure has been amended to eliminate reference numbers and legal phraseology.

Claims 1-10 have been amended to eliminate reference numbers, the phrase "the steps of," the term "preferably," any lack of antecedent basis. As such, claims 1-10 have been clarified by amendment above for purposes of form.

It is respectfully submitted that the amendments to claims 1-10 are neither narrowing nor made for substantial reasons related to patentability as defined by the Court of Appeals for the Federal Circuit (CAFC) in Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 95-1066 (Fed. Cir. 2000).

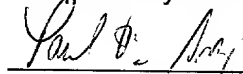
Therefore, the amendments to claims 1-10 do not create prosecution history estoppel and, as such, the doctrine of equivalents is available for all of the elements of claims 1-10.

Consideration and allowance of the claims is respectfully requested.

Attached hereto is a marked up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made."

8-3-01  
\_\_\_\_\_  
Date

Respectfully submitted,



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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

In The Specification

On page 1, between lines 2 and 3, insert -- 1. Field of the Invention --.

On page 1, between lines 4 and 5, insert -- 2. Discussion of the Background Art --.

In The Abstract

Please amend the abstract as follows:

A wavelength-determining unit [(20)] for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$  [comprises] ~~includes~~ a wavemeter unit [(30)] for determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ . An absolute-measuring unit [(40)] having unambiguous wavelength properties at known absolute wavelength values determines second wavelength values  $\lambda_2(t)$  as such of the known absolute wavelength values covered by the optical signals  $\lambda(t)$ . An evaluation unit [(50)] receives the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values and [for] provides ~~for~~ corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.

[[Fig. 1 for publication]]

In The Claims

Please amend the claims as follows:

1. (Amended) A wavelength-determining unit [(20)] for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$ , comprising:

a wavemeter unit [(30)] adapted for determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ ,

an absolute-measuring unit [(40)] having unambiguous wavelength properties at known absolute wavelength values, and being adapted for determining second wavelength values  $\lambda_2(t)$  as such of the known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and

an evaluation unit [(50)] adapted for receiving the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values and for providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.

2. (Amended) The wavelength-determining unit [(20)] of claim 1, wherein the wavemeter unit [(30)] has a wavelength characteristic known in principle or derived from former measurements, whereby the evaluation unit [(50)] adjusts the known wavelength characteristic based on the determining second wavelength values  $\lambda_2(t)$ .

3. (Amended) The wavelength-determining unit [(20)] of claim 1 [ or 2], wherein the evaluation unit [(50)] comprises a correlation unit for correlating the determined first wavelength values  $\lambda_1(t)$  with the second wavelength values  $\lambda_2(t)$ .

4. (Amended) The wavelength-determining unit [(20)] of claim 1[ or any one of the above claims], wherein the evaluation unit [(50)] determines at least one of one or more offset [and/]or correction[s] values for correcting the determining first wavelength values  $\lambda_1(t)$  to the corrected wavelength values  $\lambda_{1'}(t)$ .

5. (Amended) The wavelength-determining unit [(20)] of claim 1 [ or any one of the above claims], wherein the wavemeter unit [(30)] comprises an interferometer.

6. (Amended) The wavelength-determining unit [(20)] of claim 1 [or any one of the above claims], wherein the absolute-measuring unit [(40)] comprises a gas absorption cell.



7. (Amended) A measuring unit for measuring an optical characteristic of a device under test – DUT – [(100)], comprising:

a wavelength variable laser source [(10)] adapted for providing an optical signal  $\lambda(t)$  to the DUT [(100)], the optical signal  $\lambda(t)$  having a wavelength variation over the time[.];

a wavelength-determining unit [(20) of claim 1 or any one of the above claims] adapted for receiving the optical signal  $\lambda(t)$  and determining wavelength values  $\lambda_1(t)$  thereof over the time, said wavelength determining unit comprising a wavemeter unit adapted for determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ , an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values, and being adapted for determining second wavelength values  $\lambda_2(t)$  as such of the known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and a first evaluation unit adapted for receiving the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values and for providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values;

a receiver [(110)] for receiving a signal response on the optical signal  $\lambda(t)$  provided to the DUT [(100).]; and

[an] a second evaluation unit [(200)] receiving the signal response and the thereto corresponding determined wavelength values  $\lambda_1'(t)$ .

8. (Amended) A measuring unit for measuring an optical characteristic of a device under test – DUT – [(100)], comprising:

a wavelength variable laser source [(10)] adapted for providing an optical signal  $\lambda(t)$  to the DUT [(100)], the optical signal  $\lambda(t)$  having a wavelength variation over the time,

a wavelength-determining unit [(20)] adapted for receiving the optical signal  $\lambda(t)$  and determining relative wavelength values  $\lambda_1(t)$  and absolute wavelength values  $\lambda_2(t)$  thereof over the time,

a receiver [(110)] for receiving a signal response  $I(t)$  on the optical signal  $\lambda(t)$  provided to the DUT [(100)], and

an evaluation unit [(50)] receiving the signal response of the receiver [(110)] and thereto calculating the corresponding wavelength values  $\lambda_1'(t)$  out of the wavelength values  $\lambda_1(t)$  and  $\lambda_2(t)$  from the wavelength-determining unit [(20)] resulting in a spectral response  $I(\lambda)$  of the DUT [(100)].

9. (Amended) A method for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$ , comprising [the steps of]:

determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ ,

using an absolute-measuring unit [(40)] having unambiguous wavelength properties at known absolute wavelength values for determining second wavelength values  $\lambda_2(t)$  as such known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and

providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.

10. (Amended) A software product, [preferably] stored on a data carrier, for executing [the method of claim 9] a method for determining the wavelengths of a plurality of successive optical signals  $\lambda(t)$ , when run on a data processing system such as a computer, said method comprising:

determining first wavelength values  $\lambda_1(t)$  for the optical signals  $\lambda(t)$ ,

using an absolute-measuring unit having unambiguous wavelength properties at known absolute wavelength values for determining second wavelength values  $\lambda_2(t)$  as such known absolute wavelength values covered by the optical signals  $\lambda(t)$ , and

providing corrected wavelength values  $\lambda_1'(t)$  based on a comparison of the determined first  $\lambda_1(t)$  and second  $\lambda_2(t)$  wavelength values.